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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,242	02/25/2002	Tatsuya Konagaya	Q68493	2562

7590 10/03/2006

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EXAMINER
SAFAIPOUR, HOUSHANG

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/081,242	<b>Applicant(s)</b> KONAGAYA, TATSUYA	
	<b>Examiner</b> Houshang Safaipoor	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-17, 19 and 22 is/are rejected.
- 7) ☒ Claim(s) 8-11, 18, 20, 21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**JEROME STANT**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed July 19, 2006 have been fully considered but they are not persuasive. In regards to claim 1 applicant argues that the cited reference by "Izumi does not teach or suggest the last limitation of claim 1." Examiner disagrees. The last limitation of claim 1 recites that "the electric current value of the said light source used when reading said image is identical with said current value set by said light amount regulating means." Izumi discloses that the initial value of an input voltage (current) of the inverter 11 is simultaneously set to light the lamp 1 (col. 4, lines 12-14) and further discloses that the inverter control circuit 7 (fig. 1, inverter control circuit includes inverter 11 and D/A 12) controls the inverter 11 to change the luminance of the lamp 1 (col. 4, lines 22-23) and when the inverter input voltage (current) is changed the illumination intensity of lamp 1 is changed (col. 5, lines 63-65). Izumi also discloses that when the input voltage (current) of the inverter 11 is set at maximum value of the variable output range, white correction is performed in such a manner the lamp 1 is lit (intensity) at the maximum value of the inverter control range (voltage or current) (col. 5, lines 28-34) (it means that the two values are made the same, by performing white correction, even if the lamp 1 is deteriorated further). Applicant concludes that "Therefore, there is no electric current value for the regulating means." Please note that Izumi teaches varying the voltage of the inverter to adjust the lamp intensity as mentioned above. There exists a direct relationship between the value of the voltage and the current when the resistance is constant. Therefore, varying the voltage is the same as varying the current. For the reasons stated above, the rejection of the claims is maintained.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 14, 16, 17, 19 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Izumi (U.S. Patent No. 6,650,443).

Regarding claims 1 and 22, Izumi discloses an image reader for reading an image recorded on an original, comprising:

a light source for emitting a light toward said original (fig. 1, lamp 1);

an imaging device for receiving the light emitted from said light source and having passed through said original (fig. 1, CCD 4); and

light-amount regulating means for regulating a light amount of said light source, said light-amount regulating means setting an electric-current value of said light source so as to make

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an output value of said imaging device converge within a predetermined range (fig. 1, inverter 7, col. 5, lines 26-40),

wherein the electric-current value of said light source used when reading said image is identical with said electric-current value set by said light-amount regulating means (col. 5, lines 29-36).

Regarding claims 14 and 16, Izumi discloses an image reader according to claim 1, wherein said light source is an electroluminescence element, a coloring layer of which includes the respective coloring layers of red, green, and blue (col. 7, lines 19-22).

Regarding claim 17, Izumi discloses an image reader according to claim 1, wherein said imaging device is an area CCD (fig. 1, CCD 4).

Regarding claim 19, Izumi discloses an image reader according to claim 1, wherein said light-amount regulating means automatically regulates said light amount again when the light amount of said light emitting elements declines by a prescribed amount or more (col. 4, lines 18-29).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 6, 7, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (U.S. Patent No. 6,650,443).

Regarding claim 2, Izumi discloses an image reader according to claim 1, wherein said light source includes a plurality of light emitting elements for emitting the lights of red, green and blue, and the light amount of said light source is regulated with respect to the light emitting elements of each color (col. 7, line 20). Izumi does not explicitly disclose that the light emitting elements include infrared light. However using infrared light in film scanning is well known and routinely implemented in the art. Therefore it would have been obvious to a person of ordinary skill in the art to include infrared light in Izumi's apparatus for detecting defects on the image.

Regarding claims 6 and 7, performing fine scanning and adjusting the illumination based on the result of pre-scanning is well known and routinely implemented in the art. Therefore it would have been obvious to utilize this procedure in Izumi's image processing device to increase the speed and efficiency of the scanning because pre scanning is performed much faster than fine scanning

Regarding claim 12, Izumi discloses an image reader according to claim 2, wherein said light emitting element is a light emitting diode (please refer to the discussion under claim 2).

Regarding claims 13 and 15, to have light emitting diodes arranged in the matrix form is well known and routinely implemented in the art.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (U.S. Patent No. 6,650,443) and further in view of Rubin et al. (U.S. Patent No. 6,438,256).

Regarding claim 3, Izumi does not disclose utilizing binary search for regulating the light amount. Rubin et al. discloses such a method for illumination adjustment (col. 8, lines 4-9).

Therefore it would have been obvious to a person of ordinary skill in the art to utilize binary

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search method described in Rubin's invention in order to adjust illumination level in Izumi's image reading and processing apparatus.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (U.S. Patent No. 6,650,443) and in view of Rubin et al. (U.S. Patent No. 6,438,256) and further in view of Maeshima et al. (U.S. Patent No. 5,475,508).

Regarding claim 4, neither Izumi nor Rubin disclose charge storage time of the imaging device to be shorter in an order of the red light, the green light, and the blue light. Maeshima discloses prolonging the storage time of the sensors for the lights with low sensitivity, for example blue color (col. 14, lines 14-28). Therefore it would have been obvious to a person of ordinary skill in the art to have the storage time of the imaging device to be shorter for red and green compare with blue in order to have a good color balance.

Regarding claim 5, neither Izumi nor Rubin disclose charge storage time of the imaging device to be shorter in an order of the red light, the green light, and the blue light. Maeshima discloses prolonging the storage time of the sensors for the lights with low sensitivity, for example blue color (col. 14, lines 14-28). Therefore it would have been obvious to a person of ordinary skill in the art to have the storage time of the imaging device to be shorter for red and green compare with blue in order to have a good color balance.

#### ***Allowable Subject Matter***

Claim 8 reciting that electric-current value of the light emitting elements emitting the infrared light is set to a constant value is objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9, 10 and 11 reciting "...wherein the light amount of said light source is also regulated when adjusting a position of said original, at this time, the electric-current value of said light source being set separately from said electric-current value for reading said image" is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18, 20 and 21 reciting displaying an error message when the light amount of the light emitting elements declines by a prescribed amount or more is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 23 reciting "store at least one electric-current set value of said light source and the predetermined range; calculate a central value from said at least one electric-current set value; compare the predetermined range with a first output value of said image device which is obtained using said central value; use said central value when reading said image if the first output value converges the predetermined range; and continue to calculate another central value from said at least one electric-current set value until another output value of said image device obtained using the other central value converges the predetermined range if the first output value does not converge the predetermined range, and use the other central value when reading said image, if the other output value converges the predetermined range" is objected to as being



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dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 24 is allowed for the same reasons as stated for claim 8.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Houshang Safaipoor whose telephone number is (571)272-7412. The examiner can normally be reached on Mon.-Fri. from 6:00am to 2:30pm.

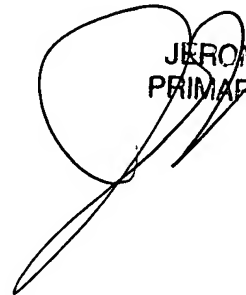
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Houshang Safaipoor  
Patent Examiner  
September 25, 2006



JEROME GRANT II  
PRIMARY EXAMINER